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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
Group Art Unit 1614

In re

Patent Application of

Thomas H. Barrows, et al.

Application No. 10/810,518

Confirmation No.: 1213

Filed: March 26, 2004

Examiner: Unknown

“TISSUE ENGINEERED BIOMIMETIC  
HAIR FOLLICLE GRAFT”

I, Julie Mallder, hereby certify that this correspondence is being deposited with the US Postal Service as first class mail in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date of my signature.

*Julie Mallder*  
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*May 13, 2005*  
Date of Signature

INFORMATION DISCLOSURE STATEMENT  
PURSUANT TO 37 CFR §1.97(b)

Mail Stop Amendment  
Commissioner for Patents  
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Alexandria, VA 22313-1450

Sir:

The Examiner's attention is directed to the references which are listed on the attached Form PTO/SB/08A and PTO/SB/08B and copies of non-U.S. patent references are attached.

Also, the Examiner's attention is directed to:

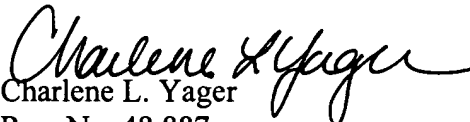
                     1. U.S. Patent Application Serial No. 10/804,643, filed March 19, 2004.  
Examiner's Initials

Applicants request that the Examiner initial the above once considered.

Citation of these references is respectfully requested.

No concession is made that these documents are prior art, and Applicant expressly reserves the right to antedate the documents as may be appropriate.

Respectfully submitted,

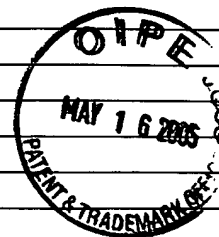
  
Charlene L. Yager  
Reg. No. 48,887

File No. 010414-9012

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Substitute for form 1449/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)			<b>Complete if Known</b>		
			Application Number	10/810,518	
			Filing Date	March 26, 2004	
			First Named Inventor	Thomas H. Barrows	
			Group Art Unit	1614	
			Examiner Name	Unknown	
Sheet	1	of	6	Attorney Docket Number	010414-9012



US. PATENTS				
Examiner Initials		U.S. Patent Document Number	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document
		2946769	Rose et al.	07/1960
		3025323	Rose et al.	03/1962
		3966766	Lehn	06/1976
		4052988	Doddi et al.	10/1977
		4104195	Ley et al.	08/1978
		4209607	Shalaby et al.	06/1980
		4226243	Shalaby et al.	10/1980
		4242931	Clement	01/1981
		4343931	Barrows	08/1982
		4384061	Reiter et al.	05/1983
		4429080	Casey et al.	01/1984
		4458678	Yannas et al.	07/1984
		4505266	Yannas et al.	03/1985
		4529792	Barrows	07/1985
		4604097	Graves Jr., et al.	08/1986
		4643734	Lin	02/1987
		4719917	Barrows et al.	01/1988
		4851521	della Valle et al.	07/1989
		4919664	Oliver et al.	04/1990
		5091173	Buultjens et al.	02/1992
		5133739	Bezwada et al.	07/1992
		5141522	Landi	08/1992
		5147400	Kaplan et al.	09/1992
		5198507	Kohn et al.	03/1993
		5286837	Barrows et al.	02/1994
		5393323	Simmons	02/1995
		5403347	Roby et al.	04/1995
		5415378	Craven	05/1996
		5423778	Eriksson et al.	06/1995
		5486593	Tang et al.	01/1996
		5502092	Barrows et al.	03/1996

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U.S. PATENTS				
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		5514378	Mikos et al.	05/1996
		5522841	Roby et al.	06/1996
		5545208	Wolff et al.	08/1996
		5556783	Lavker et al.	09/1996
		5578046	Liu et al.	11/1996
		5599552	Dunn et al.	02/1997
		5639645	Murata	06/1997
		5661132	Eriksson et al.	08/1997
		5667961	Bernard et al.	09/1997
		5674286	D'Alessio et al.	10/1997
		5677355	Shalaby et al.	10/1997
		5697901	Eriksson	12/1997
		5697976	Chesterfield et al.	12/1997
		5721049	Marcolongo et al.	02/1998
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		5770417	Vacanti et al.	06/1998
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		6027744	Vacanti et al.	02/2000
		6031148	Hayes et al.	02/2000
		6051750	Bell	04/2000
		6093200	Liu et al.	07/2000
		6120788	Barrows	09/2000

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US. PATENTS				
Examiner Initials		U.S. Patent Document Number	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document
		6147135	Yuan et al.	11/2000
		6159950	Crystal et al.	12/2000
		6303697	Yuan et al.	10/2001
		6333029	Vyakarnam et al	12/2001
		6350284	Tormala et al.	02/2002
		6365172	Barrows	04/2002
		6423252	Chun et al.	07/2004
		6436424	Vogel et al.	08/2002
		6511748	Barrows	01/2003
		6569143	Alchas et al.	05/2003
		6613798	Porter et al.	09/2003
		6639051	Wang	10/2003
		6660301	Vogel et al.	12/2003
		6699287	Son et al.	03/2004
		6773713	Bonassar et al.	08/2004
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		20020049426	Butler et al.	04/2002
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		20020197326	Vogel et al.	12/2002
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		20030161815	Wolowacz et al	08/2003
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		20030198646	Stenn	10/2003
		20030203003	Nelson et al	10/2003
		20030208138	Olson	11/2003

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US. PATENTS				
Examiner Initials		U.S. Patent Document Number	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document
		20030211083	Vogel et al.	11/2003
		20040033598	Vacanti et al.	02/2004
		20040039438	Alt	02/2004
		20040054410	Barrows	03/2004
		20040057937	Jahoda et al.	03/2004
		20040068284	Barrows	04/2004
		20040096514	Vogel	05/2004

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FOREIGN PATENT DOCUMENTS						
Examiner Initials		Country Code	Foreign Patent Document Number	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document	English Abstract
			CA2140090	Liu et al.	08/1995	
			CA2199918	Bezwada et al.	09/1997	
			EP00845963	Isolagen International	09/2003	
			EP0236014	Univ Dundee	09/1987	
			EP1002859	Isotus B.V.	05/2000	
			EP1083874	Hamilton et al.	01/2004	
			EP1089704	Montanari et al.	02/2004	
			EP1098626	Bradbury et al.	05/2004	
			EP1437042	Shiseido Company Ltd.	07/2004	
			EP405656	Univ Dundee	01/1991	
			EP971679	Gho et al.	06/2002	
			JP3273028	PolyPlasticks	12/1991	Y
			JP3328229	Japan Science & Technology Corp.	11/2003	Y
			WO199844027	Shea Lonnie, U of Mich	10/1998	
			WO199847471	Gho et al.	10/1998	
			WO199901034	Vogel et al.	01/1999	
			WO199934750	BioAmide Inc.	07/1999	
			WO199962491	Guilford Pharmaceuticals Inc.	06/1998	
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			WO200029553	Organogenesis Inc.	05/2000	
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			WO200062829	Lhommeau Christell, et al.	10/2000	
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			WO200166472	Tei Biosciences, Inc.	09/2001	
			WO200170132	Biosphere Medical Inc.	09/2001	
			WO200170289	Biosphere Medical Inc.	09/2001	
			WO200170290	Biosphere Medical Inc.	09/2001	
			WO200170291	Biosphere Medical Inc.	09/2001	
			WO2002060396	BioAmide, Inc.	08/2002	
			WO2002070728	The John Hopkins University	09/2002	
			WO200215952	Barrows	04/2004	

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				First Named Inventor	Thomas H. Barrows
				Group Art Unit	1614
				Examiner Name	Unknown
Sheet	6	of	6	Attorney Docket Number	010414-9012

FOREIGN PATENT DOCUMENTS							
Examiner Initials		Country Code	Foreign Patent Document Number	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document	Translation	English Abstract
			WO2003022043	Shiseido Company Ltd.	03/2003	N	Y
			WO2003104443	Hoffman	12/2003	N	Y
			WO2004044188	Intercytex Limited	05/2004	Y	

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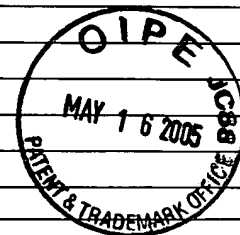
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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)			Application Number	10/810,518	
			Filing Date	March 26, 2004	
			First Named Inventor	Thomas H. Barrows	
			Group Art Unit	1614	
			Examiner Name	Unknown	
Sheet	1	of	8	Attorney Docket Number	010414-9012

**OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS**

Examiner Initials		Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc. ), date, pages(s), volume-issue numbers(s), publisher, city and/or country where published.
		ARASE, Seigi, <i>et al.</i> , Tokushima J. exp. Med. 36: 87-95 (1989)
		BARROWS TH, Cochran SA, Griffin EI and Solomon AR, "Tissue Engineered Human Hair: Preliminary Clinical Results" TE2002: <i>International Workshop on Tissue Engineering</i> , St. Gallen, Switzerland (February 2002)
		BIOGLASS, <a href="http://www.usbiomat.com/bioglass.html">http://www.usbiomat.com/bioglass.html</a> 12/28/00.
		CHANG <i>et al.</i> (2004) "Sculpting skin appendages out of epidermal layers via temporally and spatially regulated apoptotic events" <i>J Invest Dermatol</i> 122:1348-1355.
		CHIANG <i>et al.</i> , 1999, "Essential Role for Sonic hedgehog during Hair Follicle Morphogenesis," <i>Dev. Biol.</i> 205:1-9
		COHEN J, "The transplantation of individual rat and guinea-pig whisker papillae," <i>J Embryol Exp Morphol.</i> 1961 Mar;9:117-27.
		COTSARELIS G, Sun TT, Lavker RM. (1990) Label-retaining cells reside in the bulge area of pilosebaceous unit. Implications for follicular stem cells, hair cycle and skin carcinogenesis <i>Cell</i> 61:1329 - 1337.
		CSIRO <i>et al.</i> , <i>Arch Dermatol Res.</i> 183(5):321-327 abstract.
		DELEENS, G., <i>et al.</i> , <i>SPIE 39th Ann. Tech. Conf.</i> , Boston, MA 5/4-7/81
		DLUGOSZ, (1999), "The Hedgehog and the hair follicle: a growing relationship", <i>The Journal of Clinical Investigation</i> , Vol. 104, 851-853.
		DOMASHENKO, <i>et al.</i> , (2000), "Efficient delivery of transgenes to human hair follicle progenitor cells using topical lipoplex", <i>Nature Biotechnology</i> , Vol. 18, 420-423.
		DU CROS <i>et al.</i> (1995) "Association of versican with dermal matrices and its potential role in hair follicle development and cycling: <i>J Invest Dermatol</i> 105:426-31.
		DYCE <i>et al.</i> , (2004) "Stem cells with multilineage potential derived from porcine skin" <i>Bioche Biophys Res Commun</i> , 316:651-658.
		EBLING FJ, "The biology of hair," <i>Dermatol Clin</i> 1987 Jul;5(3):467-81
		ELSDALE T, and BARD J, (1972) "Cellular Interactions in Mass Cultures of Human Diploid Fibroblasts" <i>Nature</i> 236: 152-155

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		EVANS, G.R., Brandt, K., Widmer, M.S., Lu, L., Meszlenyi, R.K., Gupta, P.K., Mikos, A.G., Hodges, J., Williams, J., Gurlek, A., Nabawi, A., Lohman, R., and Patrick, C.W. Jr., "In vivo evaluation of poly(L-lactic acid) porous conduits for peripheral nerve regeneration" <i>Biomaterials</i> 20 (1999) 1109-1115.
		FAVIER B, <i>et al.</i> "Localisation of members of the notch system and the differentiation of vibrissa hair follicles: receptors, ligands, and fringe modulators" <i>Dev Dyn</i> 2000 July;218(3):426-37.
		FERRARIS <i>et al.</i> , 1997, "Adult epidermal keratinocytes are endowed with pilosebaceous forming abilities" <i>Int. J. Dev. Biol.</i> , 41:491-498
		FOITZIK, <i>et al.</i> , (2000) "Control of murine hair follicle regression (catagen) by TGF-B1 in vitro", <i>Catagen Induction by TGF-B1, The FASEB Journal</i> , Vol. 14, 752-760.
		FUJIE <i>et al.</i> (2001) "The chemotactic effect of a dermal papilla cell-derived factor on outer root sheath cells," <i>J. Dermatol. Sci.</i> 25(3):206-12.
		GAMBARDELLA <i>et al.</i> , (2000) "Pattern of Expression of the Transcription Factor Krox-20 in mouse hair follicle", <i>Mech. Of Dev.</i> 96:215-218
		HAGE JJ and Freerk GB, (1991) "Surgical Depilation for the Treatment of Pseudofolliculitis or Local Hirsutism of the Face: Experience in the First 40 Patients" <i>Surgical Depilation for Pseudofolliculitis</i> , 88(3) 446-451.
		HARDY M, (1949) " The development of mouse hair in vitro wit some observations on pigmentation" <i>J. Anat.</i> , 83:364-384.
		HARDY, M., (1992) "The Secret Life of the Hair Follicle," <i>Trends in Genetics</i> 8:55-61.
		HAYNESWORTH, <i>et al.</i> , (1993) "Diminution of the Number of Mesenchymal Stem Cells as a Cause for Skeletal Aging" Chapter 7, 79-87.(Eds. J.A. Buckwater & V.M. Goldberg).
		HORNE <i>et al.</i> , (1992) <i>Development</i> 116(3), abstract
		HORNE, Kenneth A, <i>et al.</i> "Whisker growth induced by implantation of cultured vibrissa dermal papilla cells in the adult rat" <i>J Embryol Exp Morphol.</i> 1986 Sep;97:111-24.

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		HU M, Sabelmann EE, Lai S, Timek EK, Zhang F, Hentz, VR and Lineaweaver, CW, " <i>Journal of Biomedical Materials Research</i> , vol. 47, pages 79-84 (1999).
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				Filing Date	March 26, 2004
				First Named Inventor	Thomas H. Barrows
				Group Art Unit	1614
				Examiner Name	Unknown
Sheet	4	of	8	Attorney Docket Number	010414-9012

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